

## **REMARKS**

Claims 1-21 are pending in the application. New claims 22-23 are added. Support for the new claims 22-23 is found at paragraphs 27-32 and 52 and throughout the application.

### **Claim rejections-35 U.S.C. § 103**

In the Office Action dated September 7, 2007, claims 1-21 have been rejected under 35 U.S.C. §103(a) as being obvious over the combined teachings of Burnham (US 6,841,515), Burnham *et al.* (US 5,853,450) and Kimura (US 5,093,262). The Examiner mentioned that it would have been obvious to the ordinary artisan at the time the invention was made to have made a granular fertilizer composition comprising a bacterial fermentation product because the prior art teaches solid fertilizer compositions comprising known NPK fertilizer components in combination with bacterial materials.

Following the last response submitted December 6, 2007, the Examiner further maintains in the Advisory Action issued on January 16, 2008, that biosolids in the reference of Burnham (US '515) do not require encapsulation and would therefore allow the bacteria to be available in active form. The Examiner further mentions that Burnham (US '515) teaches a bacterial fermentation sludge that is equivalent to the bacteria being obtained from fermentation stopped before bacteria is in a dormant stage.

In this regard, Applicant wishes to reiterate that the document of Burnham (US '515) teaches a method of production of encapsulated and/or concentrically-constructed fertilizer. The document of Burnham (US '515) teaches that micro-organisms are included in one or more layers of the granule (see column 2 lines 25-46 in Burnham). Even though Burnham (US '515) mentions in column 4 and 6 that the biosolids can be encapsulated, it is clear from the text recited at column 4, lines 38-49 that homogenous granules are not ideal for biosolid treatment.

Burnham (US '515) specifically teaches that homogenous granules have a problem which consists in that they tend to react with water, oxygen and other substances during storage. Thus, the invention disclosed in Burnham (US '515) presents a solution to the mentioned problem which is a method that allows controlled release of the active contents. A person skilled in the art would acknowledge that in order to control the release of the active ingredients, a granule needs not to be homogenous and needs to include at least one layer. Consequently, even though Burnham (US '515) mentions in column 4 and 6 that the biosolids can be encapsulated, the description is teaching away from the possibility of producing a granule without encapsulation. Such granule without encapsulation would not allow controlled release of the active contents. Clearly, the granules produced following the method of Burnham (US '515) needs to have at least one layer so as to overcome the drawbacks of the prior art identified therein. Doing otherwise would deny the invention disclosed in Burnham (US '515). Further, the Applicant wishes to reiterate that the objective of the encapsulation of the outer layer taught in Burnham is to allow a control on the release of the active contents and not to allow immediate activation of the bacteria and thus without lag time. It is clearly stated in column 4, lines 56-60 of Burnham that *"Accordingly, the inventors realized great improvement to the art of biosolid use may be obtained by 1) limiting exposure and activation of active substances in the biosolid during storage, and 2) control of biosolid disintegration during use...". It is contradictory that the Examiner is construing the teaching of Burnham to encompass biosolids not encapsulated when such biosolids will not have all the advantages taught and desired by the invention disclosed in Burnham.*

Thus, it is believed that the document of Burnham teaches away from the present application since the present application is claiming a fertilizer wherein the bacteria are active

immediately, i.e. readily available and without a lag time. The present application teaches, and claims in amended claim 1, a method of producing a fertilizer comprising the step of mixing a granular fertilizer with a ferment comprising active bacteria, wherein bacteria are obtained from a fermentation stopped before bacteria get into a dormant stage, which will prevent the bacteria to have a lag time upon re-hydration. The bacteria once sprayed on the fertilizer are ready to resume their growth and/or activity upon application and their release is not controlled by the presence of a layer or an encapsulation. The present application is claiming bacteria which, once sprayed on the fertilizer, are ready to resume their growth and/or activity upon application and there is no control or limitation on their activation as taught by Burnham.

In addition, Applicant wishes to resubmit that the present application is claiming a method for producing a fertilizer or a fertilizer produced by said method wherein the ferment is used at a rate of at most 3 liters of ferment per ton of fertilizer. As mentioned on page 6 of the present application, spraying the fertilizer at a higher rate will cause the fertilizer to partly solubilize, liberating nitrogen concentrated at the surface of the fertilizer, in the vicinity of the bacteria, which is toxic to the bacteria in such concentrated micro-environment. Consequently, a person skilled in the art with the teaching of the present application would recognize that dissolving the fertilizer in greater volume would cause toxicity to the bacteria and kill them. In addition, as supported by the Declaration enclosed herewith from Dr. Alexandre Blais, when the fertilizer of the present invention is used at a rate of more than 3 liters of ferment per tone of fertilizer, the fertilizer agglomerate. Dehydration of the fertilizer disclosed in the present application allows not only to prevent agglomeration at a lower volume of use but also to prevent cellular damage caused to the bacteria. On the contrary, Burnham is teaching granules having water (see column 8 in Burnham, lines 1-6).

Nowhere in Burnham is there any teaching or even suggestion of the subject matter presented hereinabove and claimed in the present application. Thus, it is believed that there is no incentive in Burnham that will lead a person skilled in the art to obtain the present invention, or to combine the teaching of Burnham with that of Burnham *et al.* (US 5,853,450) and Kimura (US 5,093,262), in order to obtain the present invention. The references of Burnham *et al.* (US 5,853,450) and Kimura (US 5,093,262) do not teach or even suggest the elements that are not described in Burnham ('515) as discussed hereinabove and in the previous response submitted September 28 and December 6, 2007. More specifically, the references of Burnham *et al.* (US 5,853,450) and Kimura (US 5,093,262) do not teach or even suggest a method for producing a fertilizer or a fertilizer produced by said method wherein the ferment is used at a rate of at most 3 liters of ferment per ton of fertilizer or that fermentation needs to be stopped before bacteria get into a dormant stage, which will prevent the bacteria to have a lag time upon re-hydration. In view of the amendments and arguments presented hereinabove, reconsideration of Examiner's rejections under 35 U.S.C. §103(a), is earnestly requested.

It is submitted, therefore, that the claims are now in condition for allowance. Reconsideration of the Examiner's rejections is respectfully requested. Allowance of claims 1-21 at an early date is solicited.

In the event that there are any questions concerning this amendment or the application in general, the Examiner is respectfully urged to telephone the undersigned so that prosecution of this application may be expedited.

Should any fee deficiencies be associated with this submission, the Commissioner is authorized to debit such deficiencies to the Nixon Peabody Deposit Account No. 50-0850. Any overpayments should be credited to said Deposit Account.

Respectfully submitted,

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/Stephen R. Duly/

David S. Resnick (Reg. No. 34,235)  
Stephen R. Duly (Reg. No. 56,183)  
NIXON PEABODY LLP  
100 Summer Street  
Boston, MA 02110-2131  
(617) 345-6057 / 1270

Enc. Notice of Appeal  
Declaration Under 1.32 by Alexandre Blais  
Three month extension of time